

analysis with the biosensor and a buffer agent that adjusts a pH of the sample solution to a pH range adequate for an activity of an enzyme in the biosensor; and

(c) a sample releasing part;

wherein the instrument is not physically coupled to the biosensor.

Please add new claim 30 as follows:

30. (New) A sample solution treating instrument comprising:

(a) a sample introducing part;

(b) a control means for converting a sample solution to a condition for analysis by a biosensor that electrochemically measures a specific component in the sample solution, wherein the control means comprises

an adsorbent that adsorbs and removes an interfering substance from the sample solution, and

an agent selected from the group consisting of a catalyst that converts an interfering substance in the sample solution to a harmless substance having no adverse effect on a measurement result of the specific component obtained by analysis with the biosensor; and a buffer agent that adjusts a pH of the sample solution to a pH range adequate for an activity of an enzyme in the biosensor; and

(c) a sample releasing part;

wherein the instrument is not physically coupled to the biosensor.

REMARKS

Claims 19, 21, 24, 25, 29, and 30 are pending in the application. New claim 30 has been added. Claim 19 has been amended. A marked up version of claim 19 showing the changes made is provided on a separate paper pursuant to 37 C.F.R. § 1.121.

In Paper No. 20, the Examiner has maintained the rejection of claims 19, 21, 24, and 25 under 35 U.S.C. § 102(b), contending that the claims are anticipated by United States Patent No. 5,571,419 of Obata, et al. ("Obata"). As basis for the rejection, the Examiner asserts that Obata discloses a method and apparatus for producing pure water in which raw water is introduced into

filtration units through a pipe and, after cation exchange, is supplied to an acidic softened water tank and stored. According to the Examiner, it is "inherent" that the pH of the raw water is altered in some way in this tank. The Examiner states that at the end of the Obata process, the now pure water is released. Further, the Examiner asserts that "since well water and tap water can be filtered using the apparatus of the reference, it is inherent that the purified water sample is fit for human consumption in some fashion. Since a person tasting water is interpreted as a biosensor analyzing a sample, the claim limitations are met." The applicants respectfully traverse this rejection.

Obata teaches a method of producing pure water from urea-containing waste water. In the Obata method, the raw waste water is sequentially introduced into a filtration tank, a cation exchange tower, an "acidic softened water tank," a heat exchanger, a heater, a reaction vessel, a decarbonation tower, an ionic exchange tower, and a reverse osmosis membrane unit, after which primary pure water is produced. Obata teaches that, once the water has been placed in the acidic softened water tank, it is tested, and if its pH is other than 3.0, it is adjusted using an oxidizing agent. See col. 7, line 3. In the reaction vessel, any urea present in the water is decomposed via a thermal decomposition process which, Obata teaches, may involve use of a platinum catalyst. Obata does not disclose consumption of the water by humans, nor is there a disclosure of not requiring interference of urea in the "measurement results" allegedly obtained by the human biosensor. urea is removed

readed In contrast, the invention as claimed is a sample solution treating instrument including a control means for converting a sample solution to a condition for analysis by a biosensor that electrochemically measures a specific component in the sample solution. The control means itself is one of (i) a catalyst that converts an interfering substance in the sample solution to a harmless substance having no adverse effect on a measurement result of the specific component obtained by analysis with the biosensor, or (ii) a buffer agent that adjusts a pH of the sample to a range adequate for inactivity of an enzyme in the biosensor (claim 19), with or without an adsorbent that adsorbs and removes an interfering substance from the sample solution (claim 30). The catalyst disclosed in Obata is a platinum catalyst that catalyzes the thermal decomposition of urea; it is not the catalyst of the invention as it does not convert an interfering substance in the sample solution to a harmless substance having no adverse effect on a measurement result of the specific component obtained by analysis with the biosensor, as is recited in the claims. Further, *yes it does* Obata does not disclose a buffer agent that adjusts a pH of a sample solution to a pH range

adequate for an activity of an enzyme in the biosensor. Obata teaches only that, in the "acid water softening tank" the water is softened to a pH of 3 using an oxidizing agent.

Furthermore, the "biosensor" which the Examiner alleges the process of the Obata references places the water in condition for is a water-tasting human. No water tasting human is present in Obata, nor is there any teaching that the Obata water is suitable for drinking. *inherent*
Furthermore, a water tasting human is not a biosensor, nor does a human utilize an enzyme to obtain electrochemically measured data to quantify a specific component in a sample. *not agreed*

Thus, for at least these reasons, the claims of the present invention are not anticipated under 35 U.S.C. § 102(b) by the disclosure of Obata. The applicants respectfully request that the Examiner reconsider and withdraw the rejection.

Also in Paper No. 20, the Examiner has maintained the rejection of claims 19, 25, and 29 under 35 U.S.C. § 102(e) as being anticipated by United States Patent No. 5,945,345 of Blatt, et al. ("Blatt"). The Examiner contends that Blatt discloses a device from removing interference that includes a filter, that includes a solid phase support and an active chemical component for binding and immobilizing the interference. The Examiner asserts that the Blatt device may also comprise a sample pad made of nylon, which, the Examiner contends, is inherently elastic. The applicants respectfully traverse this rejection.

Blatt discloses a filter for effectively removing substances from a sample of bodily fluid which can interfere with the results of an assay. The filter includes a solid phase support and an active chemical component for binding the interfering substance. The active chemical component includes any chemical or biochemical agent having an affinity for one or more of the interfering substances and capable of binding to the interfering substance and immobilizing the interfering substance on the solid phase support. Blatt does not disclose a catalyst that converts an interfering substance in the sample solution to a harmless substance having no adverse effect on a measurement result of the specific component obtained by analysis with the biosensor, nor does it teach a buffer agent that adjusts a pH of the sample solution to a pH range adequate for inactivity of an enzyme.

In contrast, the claims of the present invention are directed to a sample solution treating instrument including a control means that itself in turn includes, at minimum, an agent that is a catalyst as described (i) or that is a buffer that is described as (ii). Thus, because Blatt is missing

these elements, it does not anticipate the invention under 35 U.S.C. § 102(e), or any other subpart of § 102.

Accordingly, for at least these reasons, it is respectfully requested that the Examiner reconsider and withdraw the § 102(e) rejection based upon Blatt.

CONCLUSION

It is respectfully submitted that claims 19, 221, 24, 25, 29 and 30 are patentably distinguished over all cited prior art and are therefore in a condition suitable for allowance. Reconsideration and allowance of the claims at the earliest opportunity is earnestly solicited.

Upon review of this office action, should the Examiner consider that the prosecution of this application would be furthered by carrying out an interview with the applicants' representative, he is urged to contact her at his convenience.

Respectfully submitted,

MARIKO MIYASHITA *et al.*

24 February 2003 BY: Analyn A. Bullock
DATE

KRISTYNE A. BULLOCK

Registration No. 42,371

AKIN, GUMP, STRAUSS, HAUER & FELD, L.L.P.

One Commerce Square

2205 Market Street – Suite 2200

Philadelphia, Pennsylvania 19103

Telephone: (215) 965-1200

Direct Dial: (215) 965-1348

Facsimile: (215) 965-1210

E-Mail: kbullock@akingump.com

KAB/cmb
Enclosures



Atty. Docket No. 10059-308
(P21541-01)

RECEIVED

MAR 04 2003

**MARKED UP VERSION OF CLAIM 19,
U.S. PATENT APPLICATION SERIAL NO. 09/420,719**

19. (Thrice amended) A sample solution treating instrument comprising ~~coupling~~ **TECH CENTER 1600/2900**

(a) a sample introducing part;

(b) a control means for converting a sample solution to a condition for analysis by a biosensor that electrochemically measures a specific component in the sample solution, wherein the control means comprises an agent selected from the group consisting of a catalyst that converts an interfering substance in the sample solution to a harmless substance having no adverse effect on a measurement result of the specific component obtained by analysis with the biosensor, ~~an adsorbent that adsorbs and removes an interfering substance from the sample solution,~~ and a buffer agent that adjusts a pH of the sample solution to a pH range adequate for an activity of an enzyme in the biosensor; and

(c) a sample releasing part;

wherein the instrument is not physically coupled to the biosensor.